

09/848,246

REMARKS

Upon further consideration of this application, please review the Information Disclosure Statement, along with PTO/3B/08a and copies of the necessary citations, the submitted under a August 8, 2004 Certification/Express Mailing Date. As all of this prior art was previously made of record in this case in a timely manner, it is respectfully submitted that a Petition and/or an official fee is not necessary and the Examiner is required to substantively consider the same at this time. If any further action on the part of the Applicant is required in order for the Examiner to substantively consider all of this prior art, e.g., a Petition and/or an official fee is deemed necessary, please consider this to be the necessary Petition and charge any necessary official fee to the Deposit Account (Account No. 04-0213) of the undersigned.

Claims 26-32 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for the reasons noted in the official action. The rejected claims are accordingly amended, by the above claim amendments, and the presently pending claims are now believed to particularly point out and distinctly claim the subject matter regarded as the invention, thereby overcoming all of the raised § 112, second paragraph, rejections. If any further amendment to the claims is believed necessary, the Examiner is courteously solicited to contact the undersigned representative of the Applicant to discuss the same.

Next, this application is rejected under 35 U.S.C. § 112, first paragraph, for the reasons noted in the official action. The inadequate written description rejection is acknowledged and respectfully traversed in view of the following remarks.

Claims 27-32 are amended to overcome the raised 35 U.S.C. § 112, first paragraph, rejections. More specifically, in claim 30, the manufacturing step was unclear as the preamble states that claim 26 is for manufacturing the optical layer. Instead, the claim is now amended to recite the process of creating a silica glass core, fluorine added clad layer, and insulated coating optical fiber. Support for this amendment is found, for example, in the specification on page 10, lines 21-25, and the Applicant's admission that such a process is known in the art. It is to be appreciated that the Applicant is only admitting that this feature, and not the remainder of claim 26, is admitted as prior art.

Further, in claim 31, the material is rewritten into a closed group and is a component of the application of insulation coating step, not a separate step in and of itself. Support for this amendment is found, for example, in the specification at page 11, lines 12-14.

11/05/04 10:59 AM

09/848,246

Claims 7 and 25-32 are then rejected, under 35 U.S.C. § 103, as being unpatentable over DiVita '080 in view of Boniort '147. The Applicant acknowledges and respectfully traverses the raised obviousness rejection in view of the following remarks.

With respect to the base reference of DiVita '080, the Examiner maintains that one would reasonably expect the same result that the Applicant achieved using the method of the current claimed application. The Applicant respectfully disagrees with the Examiner's allegation concerning the DiVita '080 base reference for the following reasons.

In particular, the Applicant notes that the present invention is now amended to include the limitations of irradiating the silica glass fiber with ultraviolet radiation for an irradiating time period approximately equal to an amount of irradiation time required to lower a UV transmittance value of the silica glass fiber to no more than a predetermined UV transmittance value of the silica glass fiber so as to create multiple structural defects in the silica glass fiber and using residual heat from the spinning step for a heating time period approximately equal to an amount of heating time required to shift the peak point of infrared absorption of the glass fiber to a higher frequency side within the range from about 2255 cm⁻¹ to about 2275 cm⁻¹.

This is in distinct contrast, DiVita '080 teaches that the fiber is passed through the UV light and heated only at a rate sufficient to atomically clean the fiber. If the fiber is passed through the UV light at too fast a rate, it is possible that no structural defects will occur at all in the silica glass fiber. In addition, the length of time the fiber is exposed to the heat is important to adequately remove the structural defects which were created in the silica glass fiber. For example, as the Examiner will appreciate, if an insufficient amount of heat is provided to the silica glass fiber, most likely none of the structural defects will be removed therefrom while if excessive heat is applied to the glass fiber, additional undesired defects may occur in the silica glass fiber.

As recited in the pending claims, the intent and purpose of the presently claimed invention is to specifically create multiple structural defects in the silica glass fiber by passing the fiber through the UV light and heat the silica glass fiber for a specific length of time in order to shift a peak point of the infrared absorption of the glass fiber to a frequency within a range from about 2255 cm⁻¹ to about 2275 cm⁻¹. None of the prior art of record in this case is believed, in any way, to be directed at teaching, suggesting or disclosing the presently claimed invention.

11/5/04 - 10:08 AM

- 6 -

09/848,246

With respect to Boniort '137, it is noted that this reference is cited merely for the proposition that one can place the process close to the draw furnace and thus use of a glass fiber at an elevated temperature is known. While this may be true, it is respectfully submitted that this reference fails in any way to teach, suggest or disclose the above noted distinguishing features of first creating structural defects and then removing the structural defects so as to shift a peak point of the infrared absorption of the glass fiber to a frequency within a range from about 2255 cm^{-1} to about 2275 cm^{-1} . As such, the applied combination of Divita '080 and/or Boniort '137 still fails to render obvious the presently claimed invention and the raised rejection should be withdrawn at this time.

In order to emphasize the above noted distinctions between the presently claimed invention and the applied art, the independent claims of this application now recite the features of "irradiating the silica glass fiber with ultraviolet radiation for an irradiating time period approximately equal to an amount of irradiation time required to lower a UV transmittance value of the silica glass fiber to no more than a predetermined UV transmittance value of the silica glass fiber so as to create multiple structural defects in the silica glass fiber; applying an insulation coating around the silica glass fiber; and using residual heat from the spinning step for a heating time period approximately equal to an amount of heating time required to shift the peak point of infrared absorption of the glass fiber to a higher frequency side within the range from about 2255 cm^{-1} to about 2275 cm^{-1} ". Such features are believed to clearly and patentably distinguish the presently claimed invention from all of the art of record, including the applied art.

In view of the above amendments and remarks, it is respectfully submitted that all of the raised rejections should be withdrawn at this time. If the Examiner disagrees with the Applicant's view concerning the withdrawal of the outstanding rejections or applicability of the Divita '080 in view of Boniort '147 references, the Applicant respectfully requests the Examiner to indicate the specific passage or passages, or the drawing or drawings, which contain the necessary teaching, suggestion and/or disclosure required by case law. As such teaching, suggestion and/or disclosure is not present in the applied references, the raised rejection should be withdrawn at this time. Alternatively, if the Examiner is relying on his/her expertise in this field, the Applicant respectfully requests the Examiner to enter an affidavit substantiating the Examiner's position so that suitable contradictory evidence can be entered in this case by the Applicant.

11/05/04 10:38 AM

- 7 -

09/848,246

In view of the foregoing, it is respectfully submitted that the raised rejection(s) should be withdrawn and this application is now placed in a condition for allowance. Action to that end, in the form of an early Notice of Allowance, is courteously solicited by the Applicant at this time.

The Applicant respectfully requests that any outstanding objection(s) or requirement(s), as to the form of this application, be held in abeyance until allowable subject matter is indicated for this case.

In the event that there are any fee deficiencies or additional fees are payable, please charge the same or credit any overpayment to our Deposit Account (Account No. 04-0213).

Respectfully submitted,



Michael J. Bujold, Reg. No. 32,018
Customer No. 020210
Davis & Bujold, P.L.L.C.
Fourth Floor
500 North Commercial Street
Manchester NH 03101-1151
Telephone 603-624-9220
Facsimile 603-624-9229
E-mail: patent@davisandbujold.com